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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

KANG, ROBERT N

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,208

Applicant(s)

CRANE ET AL.

Examiner

Robert N. Kang

Art Unit

2622

RAK

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/14/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


TWYLER LAMB
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because they show device and network topography inconsistent with standard industry drawings. Figure 1 shows host computer 12A connected directly to print server 18. While this type of connection is still possible by utilizing a BNC coaxial connection or an IBM token ring, the specification does not state the network utilizes these specialized protocols. Additionally, server 18 is connected to host computer 12A as well as local printer 16A utilizing the same media; generally this type of connection is impractical and unpopular; additionally, the specification does not disclose the proper technology (two NIC's within the server) for this arrangement. Finally, network printer 14 is connected to server 18 as well as host computer 12B through the same media; the examiner is unaware of any printer with this capability. Examiner assumes that the submitted drawings are attempting to convey a standard packet-forwarding, shared media network topography such as IEEE 802.3, wherein host computers 12A, 12B, network printer 14, and print server 18 are connected to a network A on a set protocol such as 802.3, with local printers 16A and 16B directly connected to PC's and servers utilizing a different communications protocol such as USB. The network topography and communications media should be clearly defined and differentiated in both Figures 1 and 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The disclosure is objected to because of the following informalities: On page 1, paragraph 3, line 2, the disclosure refers to "a user," while in figure 1, there are two host PCs, 12A and 12B. The examiner assumes from context clues that the user specified is utilizing host PC 12B, however; clarification is required.

Throughout the disclosure and claims the applicant refers to "servant" printers. Throughout the industry the accepted term for a device without control logic or authority is "slave." Examiner suggests changing the aforementioned term to slave to maintain semantic consistency with the rest of the computing industry.

Appropriate correction is required.

Claim Objections

4. The claims objected to because of the following informalities: the phrase "at least" precedes the list of claims, insinuating applicant may elect to claim more than what is explicitly stated within the claims. This phrase must be removed, as applicant receives no protection or interpretation greater than what is expressly listed within the claim language. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yacoub (US-PAT 6452692).

With regards to claims 1 and 11, Yacoub discloses a print server 460 attached to clients 420, 422, 424, and 426 through network 450, capable of distributing print jobs to the plurality of printers as shown in fig 2 step 250. Attached to network 450 are printers 410, 412, 414, and 416. Network 450, as stated in column 12, lines 9-12, "may be a LAN, WAN, wireless network or the network of networks referred to as the Internet." Yacoub describes in his statement of the prior art in column 1, lines 43-46 that "with a traditional print server in the network, the user at each client station must select the printer that they wish to use, or they can be assigned a default printer during setup of the client station." As stated in the application disclosure on page 8 paragraph 3, "the master printer system 59 can be implemented in software, hardware, or a combination thereof." Since the master printer is not explicitly stated as a single enclosure, broadly defined, Yacoub's print server and default printer, utilizing a wireless network, functions as a "master printer." The server 680 contains a master printing mechanism defined as the default printer for the network, one of the printers 410-416, which is "capable of printing information corresponding to the print task." The server 680 also contains a network interface card 620, which, when operating on a suitable wireless network such as the IEEE 802.11 standard, functions to "wirelessly transmit information corresponding to the print task." Additionally, the printer server 680 is "configured to determine an intended destination of the print task" by pulling the print data from the virtual printer 610 emulated by software in each client station 600. While Yacoub does not explicitly state that the print server "configures the information corresponding to the print task for wireless transmission," it can be safely assumed that the network interface

card 620 is properly configured for packet encapsulation or forming on the transmission media for which it is designed. In short, Yacoub's system, utilizing a wireless transmission standard, has inherent functionality by utilizing a properly designed NIC.

With regards to claims 2 and 10, the "servant printers" fall under the widely acknowledged computing term "slave device." As defined by hp's own internal documentation, "a slave device does not have its own device controller, but instead is controlled through a master device." Thus, broadly defined, any printer in Yacoub's system connected to network 450 and not the default printer is considered a slave printer. Each printer is capable of printing a job assigned by the print server 680 and thus it is assumed that each slave printer "includes a printing mechanism." Additionally, since each slave printer is connected to the aforementioned wireless network 650, each slave printer necessarily includes a "wireless network module." The final stipulations of claims 2 and 10, "the printing mechanism being adapted to print the information corresponding to the print task, the servant wireless network module being adapted to communicatively couple with the master wireless network module and receive the information corresponding to a wirelessly transmitted print task, and wherein the master printer is adapted to wirelessly transmit the information corresponding to the print task to each servant printer," are requirements for functionality of the system as a whole and carried out by the NIC in each printer. Because the disclosure does not specify any of the "configuration" or "adaptation" procedures, examiner asserts that a properly functioning wireless networked print server and associated slave printers as recited by Yacoub intrinsically possesses these characteristics to ensure functionality.

With regards to claims 3, 5, 18, and claims 4, 6, 19, Yacoub states "network 450 may be a LAN, WAN, wireless network or the network of networks referred to as the Internet." Since the breadth of Yacoub's disclosed invention covers both Bluetooth as well as the IEEE 802.11 specification as possible wireless communications protocols, and given that every printer connected to network 450 must have an appropriate network interface card 620, these claims regarding the communications protocol of the master and slave printers as well as the method of printing are anticipated by Yacoub's networked print server and printing method.

With regards to claims 7 and 8, because every printer on the network 450 must have a communication means for transmitting or receiving data, in this case a network interface card (NIC) 620, it is apparent that the master printer embodiment (which in Yacoub's patent includes a print server and default printer) clearly contains a means for transmitting "data corresponding to the print task" through the network, and the slave printers clearly include a means for receiving the print information corresponding to the print task.

Regarding claims 9 and 12, the slave printers on network 450/650 as shown in figures 4 and 5 are single medium; there is no provision for a mixed mode network or multiple networks in Yacoub's disclosure. If, as examiner has specified earlier in the disclosure, a wireless communications protocol is chosen for network 450, then the slave printers can only receive data, corresponding to the print task or otherwise, via wireless transmission.

Regarding claim 13, the entire focus of both Yacoub's patent and the pending application is to allow user access to a multitude of printers. It seems fairly ineffectual for a networked printer to be without a means for printing the print tasks. However, in light of this claim, each printer as stated by Yacoub is capable of printing a job assigned by the print server 680 and thus it is safe to assume that each slave printer "includes a printing mechanism." Yacoub describes in steps 120 and 260 of figures 1 and 2 the user or server selected printer physically printing the information associated with the specified print task sent from host user 100 and 200, respectively.

With regards to claim 14, the aforementioned master printer, including but not limited to a printer server connected to a default printer through NICs attached to network 450 as disclosed by Yacoub, "configures the information corresponding to a print task for wireless transmission" by passing the data through the NIC 620 onto the wireless network 650. Packet formation and encapsulation is performed by the NIC to ensure accurate data transmission and basic functionality.

Regarding claims 15, 16, and 17, the Yacoub system, when used on a wireless network, precisely follows these method claims, as shown by the flowcharts 1, disclosing the printer selection algorithm used in prior art, and 2, describing the automatic printer selection algorithm patented. In either embodiment, the actual transmission and printing procedure is analogous with the applicant's proposed system. Utilizing figure 2, the user in step 200 sends a print job to the virtual printer in step 210 on the host pc. The virtual printer driver sends the print task via wireless network 450 to server in step 240, herein deemed "the first device capable of printing the information

corresponding to the print task” due to the fact that the server is coupled with the default printer to form a “master printer.” The server in step 250 determines the intended destination of the information corresponding to the print task, and the built in NIC of the server/master printer reconfigures the data for wireless transmission. Finally, the “information corresponding to the print task” is sent from the server to the desired printer via wireless network 450 in step 260. In the same step 260, the printer receives the information corresponding to the print task via wireless network 450 and prints the data for user collection in step 270.

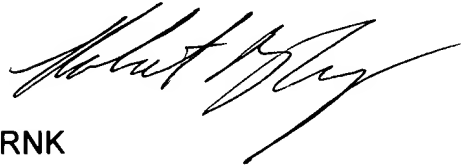
Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Walters (US-PAT 6914695) describes a digital imaging device with a built in wireless (Bluetooth or 802.11) transceiver. Grimes (US-PAT 5463623) discloses an office system utilizing a high speed LAN to connect printers and computers to a broadband ISDN connection. Kageyama (US-PAT 5305336) discloses a printing system with an integral print server. Brebner (US-PAT 6891397) describes a wired or wireless gigabit Ethernet or Bluetooth/802.11/802.16 router on a system on a chip FPGA for low cost integration into peripherals. Kato (US-PAT 6783288) describes a printer system for distributing jobs among a plurality of local printers.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert N. Kang whose telephone number is (571) 272-0593. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571)272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RNK



TWYLER LAMB
PRIMARY EXAMINER